Course Code
Course Name
Module, Academic Year

Course Information

Instructor: Qiaoqiao Zhu
Office: PHBS Building, Room
Phone: 86-755-2603-
Email:
Office Hour: TBA

Teaching Assistant:
Phone:
Email:

Classes:
Lectures: Mon & Thur 10:30-12:20
Venue: PHBS Building, Room 231

1. Course Description

1.1 Context

Course overview: Financial Econometrics course will review key issues in modelling Asset Pricing and Corporate Finance problems. I will also touch on incorporating modern machine learning techniques into classical econometric testings. The course is usefully in testing financial theories as well as industry-oriented tasks such as building a portfolio recommendation system. In completion of the module, students should have a good overview of empirical methods used in finance.

Prerequisites: Mathematics, Basic Finance Theories, Basic Econometrics

1.2 Textbooks and Reading Materials

The following books are recommended:

- *The Econometrics of Financial Markets, Campbell, Lo, & MacKinlay*
- *Asset Pricing: (Revised Edition), John H. Cochrane*
- *Introductory Econometrics for Finance, Chris Brooks*

Academic Papers will be distributed along the classes.

Students are required to use some programming software such as Python, R or SAS.

2. Learning Outcomes

2.1 Intended Learning Outcomes

Learning Goals	**Objectives**	**Assessment (YES with details or NO)**
1. Our graduates will be effective communicators.	1.1. Our students will produce quality business and research-oriented documents.	YES. Group assignments
	1.2. Students are able to professionally present their ideas and also logically explain and defend their argument.	YES, class presentations.
2. Our graduates will be skilled in team work and leadership.	2.1. Students will be able to lead and participate in group for projects, discussion, and presentation.	YES. Group assignments, presentation.
	2.2. Students will be able to apply leadership theories and related skills.	YES. Group assignments
3. Our graduates will be trained in ethics.	3.1. In a case setting, students will use appropriate techniques to analyze business problems and identify the ethical aspects, provide a solution and defend it.	YES. Group assignments
	3.2. Our students will practice ethics in the duration of the program.	
4. Our graduates will have a global perspective.	4.1. Students will have an international exposure.	YES. Group assignments, Project.
5. Our graduates will be skilled in problem-solving and critical thinking.	5.1. Our students will have a good understanding of fundamental theories in their fields.	Assignments, Projects
	5.2. Our students will be prepared to face problems in various business settings and find solutions.	Assignments, Projects
	5.3. Our students will demonstrate competency in critical thinking.	Assignments, Projects

2.2 Course specific objectives

2.3 Assessment/Grading Details

Assessment Task	Weight
Assignment	30%
Presentation	20%
Class Project	50%

Class Project will be due on July 5. No late submission is accepted.

2.4 Academic Honesty and Plagiarism

It is important for a student's effort and credit to be recognized through class assessment. Credits earned for a student work due to efforts done by others are clearly unfair. Deliberate dishonesty is considered academic misconducts, which include plagiarism; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; or altering, forging, or misusing a University academic record; or fabricating or falsifying of data, research procedures, or data analysis.

All assessments are subject to academic misconduct check. Misconduct check may include reproducing the assessment, providing a copy to another member of faculty, and/or communicate a copy of this assignment to the PHBS Discipline Committee. A suspected plagiarized document/assignment submitted to a plagiarism checking service may be kept in its database for future reference purpose.

Where violation is suspected, penalties will be implemented. The penalties for academic misconduct may include: deduction of honour points, a mark of zero on the assessment, a fail grade for the whole course, and reference of the matter to the Peking University Registrar.

For more information of plagiarism, please refer to *PHBS Student Handbook*.

3. Topics, Teaching and Assessment Schedule

Hypothesis testing vs Prediction in financial modelling.

Review of classical regression theories

Market Efficiency, Random Walk and it's testing

Linear Factor models and Predictions

Incorporating Machine Learning

Multivariate Time Series Models

Event Studies Testings

Causality: Difference-in-Difference, matching, and other techniques

4. Miscellaneous